

NOTES ON THE PARASITIC HABITS OF MUSCINA STABULANS (FALL.) (DIPTERA, MUSCIDÆ)

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The record of parasitic habits of *Muscina stabulans* (Fall.) published in the JOURNAL OF THE NEW YORK ENTOMOLOGICAL SOCIETY for December 1942¹ invites the publication of certain observations made by the writer in his studies of the armyworm and of sunflower insects.

Two male and two female *Muscina stabulans* adults were reared on August 1, 1915, from *Cirphis unipuncta* (Haw.) larvæ collected by the writer at Lafayette, Ind., June 7, 1915. One male was determined by J. M. Aldrich; the other three were determined by the writer by comparing them critically with the male determined by Dr. Aldrich. One female not of parasitic origin was also determined by Dr. Aldrich.

One male and one female *Muscina stabulans* were reared from *Cirphis unipuncta* larvæ collected at Florissant, Mo., June 9, 1919. These issued on June 27 and June 23, respectively. Armyworm larvæ collected from the same area on June 10, 1919, yielded one male and two female *M. stabulans* by June 28. The hosts of the Florissant specimens continued alive for some days after capture.

Four male and three female *Muscina stabulans* issued June 26, 1919, from *Cirphis unipuncta* larvæ collected a few days earlier in the St. Louis County and Lincoln County area.

On July 28, 1927, the writer found four *Muscina stabulans* puparia in a pupal cell of the cocklebur weevil, *Rhodoaenus tredecimpunctatus* Ill., in a sunflower stalk collected at New Madrid, Mo. Determinations were made from the puparia and from an adult which had not successfully issued. The absence

¹Curran, C. H. The Parasitic Habits of *Muscina stabulans* Fabricius. JOUR. N. Y. ENT. SOC., vol. 50, pp. 335-336. 1942.

of foreign matter in the cell indicated that the maker of the excavation alone was host of these four flies.

A parasitized pupa of the sunflower budworm, *Suleima helianthana* Riley, was found in a sunflower stalk in the same field on July 28, 1927. The parasite larva changed to a puparium subsequent to August 11, at which time it was observed free from the host. By August 26 it was a puparium. It did not yield its adult, but the determination was made from the puparium.

On September 29, 1928, a larva of *Suleima helianthana* was collected in the main stem of a sunflower at Sikeston, Mo. Subsequent to October 23, a parasite issued as a larva and formed its puparium by November 19. The adult issued subsequent to March 18, 1929, and proved to be *Muscina stabulans*.

M. T. James, of the Division of Insect Identification, Bureau of Entomology and Plant Quarantine, has kindly examined all adult specimens of *Muscina stabulans* involved in this paper and has corroborated the determinations; and C. T. Greene examined the puparia on April 14, 1943, and pronounced them to be those of the species above named.